



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,777	01/27/2004	Craig William Fellenstein	AUS920030962US1	2482
45327	7590	10/06/2008		
IBM CORPORATION (CS) C/O CARR LLP 670 FOUNDERS SQUARE 900 JACKSON STREET DALLAS, TX 75202			EXAMINER	
			AHLUWALIA, NAVNEET K	
			ART UNIT	PAPER NUMBER
			2166	
			MAIL DATE	DELIVERY MODE
			10/06/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/765,777	<b>Applicant(s)</b> FELLENSTEIN ET AL.
	<b>Examiner</b> NAVNEET K. AHLUWALIA	<b>Art Unit</b> 2166

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
  - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
  - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) Responsive to communication(s) filed on 07/01/2008.
- 2a) This action is FINAL.      2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) Claim(s) 1,3-5,7,8,10,11 and 13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) Claim(s) \_\_\_\_\_ is/are allowed.
- 6) Claim(s) 1,3-5,7,8,10,11 and 13 is/are rejected.
- 7) Claim(s) \_\_\_\_\_ is/are objected to.
- 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- 1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date \_\_\_\_\_
- 4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_
- 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_

**DETAILED ACTION**

1. This communication is in response to the Amendment filed 07/01/2008.

*Response to Arguments*

2. Applicant's arguments with respect to claims 1, 3 – 5, 7, 8, 10, 11 and 13 have been considered. Applicant's arguments filed 07/01/2008 have been fully considered but they are not persuasive.

Applicant argues that the references in combination do not teach determining whether the computer system is idle and that there is no defragmentation.

Examiner respectfully disagrees stating that Jochemsen in combination with Carlson teaches the determination of the system being idle and also defragmentation taking place in Carlson of the fragmentation occurring even when system is idle enhances the productivity and execution of the system paragraphs 26 – 27. Furthermore, in column 2 lines 58 – 67 and column 3 lines 23 – 45, Jochemsen discloses the deletion of records and the functioning of determination of system when its idle. Therefore, the arguments of the applicant do not overcome the references of record and the rejection is made final.

*Claim Rejections - 35 USC § 103*

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1, 3 – 5, 7, 8, 10, 11 and 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jochemsen et al. ('Jochemsen' herein after) (US 6,757,804 B2) further in view of Barry L. Carlson ('Carlson' herein after) (US 2003/0101383 A1).

With respect to claim 1,

Jochemsen discloses an apparatus for file defragmentation of at least one storage medium, comprising:

- a computer system at least coupled to the at least one storage medium (column 1 lines 11 – 25, Jochemsen);
- a tracker, wherein the tracker is at least configured to maintain a record of at least locations of a plurality of file fragments on at least one storage medium (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen); and
- an agent, wherein the agent is at least: configured to operate while the computer system is at least idle (column 2 lines 58 – 67, Jochemsen); configured to defragment the plurality of file fragments (column 2 lines 1 – 10, Jochemsen); modify attributes of defragmentation (column 3 lines 37 – 46, Jochemsen). and configured to delete the record of at least locations of the plurality of file fragments (column 2 lines 58 – 67 and column 3 lines 23 – 45, Jochemsen).

Jochemsen does not explicitly disclose as it is silent about the system operating when idle.

Carlson however teaches the system working at all times and explicitly discloses about the idle system (paragraphs 26 – 27, Carlson).

It would have been obvious to one of ordinary skill in the art of data processing at the time of the present invention to combine the teachings of cited references because both the inventions are directed in the same field of study namely, maintenance of storage and memory and fragmentation. The explicit disclosure in Carlson of the fragmentation occurring even when system is idle enhances the productivity and execution of the system (paragraphs 26 – 27, Carlson).

With respect to claim 3,

Jochemsen discloses the apparatus of claim 1, wherein the attributes are selected from the group consisting of file type, frequency of access, typical access duration, interval between accesses, file/application association, file size, read attributes, update attributes, and time of day of typical access (column 4 lines 22 – 226 and 42 – 47, Jochemsen).

With respect to claim 4,

Jochemsen discloses the apparatus of claim 1 further comprising:

- a memory, wherein the memory is at least configured to store locations of a plurality of file fragments (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen);
- a system monitor, wherein the system monitor at least determines if file fragmentation occurs when data is written to, deleted from, or scanned from the at least one storage medium (column 2 lines 58 – 67, Jochemsen); and

- an accounting means, wherein the accounting means is at least configured to store locations of a plurality of file fragments when the system monitor has at least determined that file fragmentation has occurred (column 3 lines 23 – 45, Jochemsen).

With respect to claim 5,

Jochemsen discloses an apparatus for file defragmentation of at least one storage medium at least coupled to a computer system, comprising:

- a memory, wherein the memory is at least configured to store locations of a plurality of file fragments (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen);
- an idle monitor, wherein the idle monitor is at least configured to enable defragmentation while the computer system is at least idle (column 2 lines 58 – 67, Jochemsen);
- a defragmenter, wherein the defragmenter is at least configured to defragment the plurality of file fragments (column 1 lines 49 – 53, Jochemsen); and
- an update monitor, wherein the update monitor is at least configured to delete a record in the memory of at least locations of the plurality of file fragments that at least been defragmented (column 3 lines 23 – 45, Jochemsen)
- ability to modify attributes of defragmentation (column 3 lines 37 – 46, Jochemsen)..

Jochemsen does not explicitly disclose as it is silent about the system operating when idle.

Carlson however teaches the system working at all times and explicitly discloses about the idle system (paragraphs 26 – 27, Carlson).

It would have been obvious to one of ordinary skill in the art of data processing at the time of the present invention to combine the teachings of cited references because both the inventions are directed in the same field of study namely, maintenance of storage and memory and fragmentation. The explicit disclosure in Carlson of the fragmentation occurring even when system is idle enhances the productivity and execution of the system (paragraphs 26 – 27, Carlson).

With respect to claim 7,

Jochemsen discloses the apparatus of claim 5, wherein the attributes are selected from the group consisting of file type, frequency of access, typical access duration, interval between accesses, file/application association, file size, read attributes, update attributes, and time of day of typical access (column 4 lines 22 – 226 and 42 – 47, Jochemsen).

With respect to claim 8,

Jochemsen discloses a method of for file defragmentation of at least one storage medium coupled to a computer system, comprising:

- determining if fragmentation occurs when data is written to, deleted from, or scanned from the at least one storage media (column 1 lines 49 – 58, Jochemsen); storing locations of a plurality of file fragments when the system monitor has at least determined that file fragmentation has occurred in a storage medium (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen);

- determining if the computer system is idle if the computer system is not idle, sleeping for an interval (column 1 lines 49 – 58, Jochemsen); if the computer system is idle, defragmenting a file (column 2 lines 58 – 67, Jochemsen);
- determining if defragmentation is complete if defragmentation is complete, deleting the location of the fragmented file clusters in the storage medium (column 1 lines 49 – 53, Jochemsen); if defragmentation is not complete, determining if defragmentation is stopped by activity (column 3 lines 22 – 34, Jochemsen); if defragmentation is stopped by activity, sleeping for an interval (column 2 lines 1 – 10, Jochemsen); and if defragmentation is not stopped by activity, reporting an error (column 3 lines 23 – 45, Jochemsen).

Jochemsen does not explicitly disclose as it is silent about the system operating when idle.

Carlson however teaches the system working at all times and explicitly discloses about the idle system (paragraphs 26 – 27, Carlson).

It would have been obvious to one of ordinary skill in the art of data processing at the time of the present invention to combine the teachings of cited references because both the inventions are directed in the same field of study namely, maintenance of storage and memory and fragmentation. The explicit disclosure in Carlson of the fragmentation occurring even when system is idle enhances the productivity and execution of the system (paragraphs 26 – 27, Carlson).

With respect to claim 10,

Jochemsen discloses a method of defragmenting at least one storage medium coupled to a computer system, comprising:

- determining if the computer system is idle if the computer system is not idle, sleeping for an interval (column 2 lines 1 – 10, Jochemsen); if the computer system is idle, defragmenting the file (column 2 lines 58 – 67, Jochemsen);
- determining if defragmentation is complete if defragmentation is complete, deleting a location of the fragmented file clusters in a storage medium (column 1 lines 49 – 53, Jochemsen); if defragmentation is not complete, determining if stopped by activity (column 3 lines 22 – 34, Jochemsen); if defragmentation is stopped by activity, sleeping for an interval (column 2 lines 1 – 10, Jochemsen); and if defragmentation is not stopped by activity, reporting an error (column 3 lines 23 – 45, Jochemsen).

Jochemsen does not explicitly disclose as it is silent about the system operating when idle.

Carlson however teaches the system working at all times and explicitly discloses about the idle system (paragraphs 26 – 27, Carlson).

It would have been obvious to one of ordinary skill in the art of data processing at the time of the present invention to combine the teachings of cited references because both the inventions are directed in the same field of study namely, maintenance of storage and memory and fragmentation. The explicit disclosure in Carlson of the fragmentation occurring even when system is idle enhances the productivity and execution of the system (paragraphs 26 – 27, Carlson).

With respect to claim 11,

Jochemsen discloses a computer program product for file defragmentation of at least one storage medium at least coupled to a computer system, the computer program product having a medium embodied thereon, the computer program comprising:

- computer code for determining if fragmentation occurs when data is written to, deleted from, or scanned from the at least one storage media (column 1 lines 49 – 58, Jochemsen); computer code for storing locations of a plurality of file fragments when the system monitor has at least determined that file fragmentation has occurred in a storage medium (column 1 lines 49 – 58 and column 2 lines 51 – 58, Jochemsen);
- computer code for determining if the computer system is idle, if the computer system is not idle, computer code for sleeping for an interval (column 2 lines 1 – 10, Jochemsen); if the computer system is idle, computer code for defragmenting a file (column 2 lines 58 – 67, Jochemsen); computer code for determining if defragmentation is complete; if defragmentation is complete, computer code for deleting the location of the fragmented file clusters in the storage medium (column 1 lines 49 – 53, Jochemsen); if defragmentation is not complete, computer code for determining if defragmentation is stopped by activity (column 3 lines 22 – 34, Jochemsen); if defragmentation is stopped by activity, computer code for sleeping for an interval (column 2 lines 1 – 10, Jochemsen); and if defragmentation is not stopped by activity, computer code for reporting an error (column 3 lines 23 – 45, Jochemsen).

Jochemsen does not explicitly disclose as it is silent about the system operating when idle.

Carlson however teaches the system working at all times and explicitly discloses about the idle system (paragraphs 26 – 27, Carlson).

It would have been obvious to one of ordinary skill in the art of data processing at the time of the present invention to combine the teachings of cited references because both the inventions are directed in the same field of study namely, maintenance of storage and memory and fragmentation. The explicit disclosure in Carlson of the fragmentation occurring even when system is idle enhances the productivity and execution of the system (paragraphs 26 – 27, Carlson).

With respect to claim 13,

Jochemsen discloses a computer program product for defragmenting at least one storage medium coupled to a computer system, the computer program product having a medium embodied thereon, the computer program comprising:

- computer code for determining if the computer system is idle, if the computer system is not idle, computer code for sleeping for an interval (column 1 lines 49 – 58, Jochemsen); if the computer system is idle, computer code for defragmenting a file (column 2 lines 58 – 67, Jochemsen);
- computer code for determining if defragmentation is complete, if defragmentation is complete, computer code for deleting a location of the fragmented file clusters in a storage medium (column 1 lines 49 – 53, Jochemsen); if defragmentation is not

complete, computer code for determining if stopped by activity (column 3 lines 22 – 34, Jochemsen); if defragmentation is stopped by activity, computer code for sleeping for an interval (column 2 lines 1 – 10, Jochemsen); and if defragmentation is not stopped by activity, computer code for reporting an error (column 3 lines 23 – 45, Jochemsen).

Jochemsen does not explicitly disclose as it is silent about the system operating when idle.

Carlson however teaches the system working at all times and explicitly discloses about the idle system (paragraphs 26 – 27, Carlson).

It would have been obvious to one of ordinary skill in the art of data processing at the time of the present invention to combine the teachings of cited references because both the inventions are directed in the same field of study namely, maintenance of storage and memory and fragmentation. The explicit disclosure in Carlson of the fragmentation occurring even when system is idle enhances the productivity and execution of the system (paragraphs 26 – 27, Carlson).

***Conclusion***

THIS ACTION IS MADE FINAL. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

***Contact Information***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Navneet K. Ahluwalia whose telephone number is 571-272-5636.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alam T. Hosain can be reached on 571-272-3978. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Navneet K. Ahluwalia/  
Examiner, Art Unit 2166

Dated: 09/29/2008

/Khanh B. Pham/  
Primary Examiner, Art Unit 2166

<b>Application Number</b> 	<b>Application/Control No.</b>	<b>Applicant(s)/Patent under Reexamination</b>
	10/765,777	FELLENSTEIN ET AL.
	<b>Examiner</b> NAVNEET K. AHLUWALIA	<b>Art Unit</b> 2166